Dheryta Jaisinghani

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Objective

To make a difference in society by finding deployment-ready solutions for real, new, and exciting problems in diverse areas of networks (wired/wireless) and mobile computing with a special focus on health applications.

Education

- **PhD (Computer Science)**, Thesis Title: Understanding the Role of Active Scans for their Better Utilization in Large-scale Wi-Fi Networks, Indraprastha Institute of Information Technology - Delhi, India, Dec 2012 - Apr 2019, CGPA 9.73/10, Advisor - Dr. Vinayak Naik, Co-Advisor - Dr. Sanjit Kaul. Thesis Examiners: Dr. Srihari Nelakuditi (University of South Carolina), Dr. Karthik Dantu (University at Buffalo), and Dr. Nirupam Roy (University of Maryland, College Park)
- **M.Tech (Information Technology)**, Thesis Title: Swift - A Low Complexity Protocol for Event & Location Tracking in Wireless Sensor Networks, International Institute of Information Technology - Bangalore, India, 2010-2012, CGPA 3.68/4, Advisor - Dr. P. G. Poonacha. Thesis Examiner - Dr. Kumar Padmanabh (British Telecom, UAE)
- **B.Tech (Computer Science and Engineering)**, Maharaja Agrasen Institute of Technology, Guru Gobind Singh Indraprastha University - Delhi, India, 2008, 83.56%.

Employment

- **Assistant Professor (*tenure-track*)**, Aug 2020 - Present, Department of Computer Science, University of Northern Iowa, Cedar Falls, Iowa, USA
- **Postdoctoral Research Associate**, May 2019 - Aug 2020 , Genesys Lab [Next Generation Wireless Systems], Northeastern University, Boston, MA, USA [Advisor: Prof. Kaushik Roy Chowdhury]
- **Research Assistant**, Mar 2017 - Sep 2017, LiveLabs, School of Information Systems, Singapore Management University, Singapore [Advisor: Prof. Rajesh K. Balan]
- **Research Internship**, May 2014 - Jun 2014, Arista Networks (Then Airtight Networks), India [Team Leads: Gopinath KN, Hemant Kelkar]
- **Software Engineer**, Aug 2008 - July 2010, Avanade Technology Group, Accenture Services Pvt. Ltd. Bangalore, India

Awards, Fellowships, & Honorable Mentions

- **Special research mention during the Iowa Board of Regents meeting**, April 2024, Refer to the YouTube recording from – 3:05:00 - 3:08:00
- **Favorite Poster Award** - W. Afeaneku, A. Berns, **D. Jaisinghani**, S. Diesburg. SocioApp: Neural Networks to Detect How Social Are You? Louis Stokes Midwest Regional Center of Excellence - Louis Stokes Alliances for Minority Participation (LSAMP) 2023
- **COMSNETS Outstanding Service Award**, Spring 2023
- **An Award from Intellectual Property and Innovation Disclosure Competition** at UNI Spring 2023
- UNI CHAS Faculty Support for research, Fall 2022
- ACM MobiCom 2018 Student Travel Grant
- **Best Graduate Forum Presenter Award** at COMSNETS 2018, Bangalore, India
- **First Prize at Nationwide Wi-Fi Competition** held by Mojo Networks at Wi-Fi Knowledge Summit 2017, IIT-Bombay, India
- Won Third Prize at Research Showcase 2017, IIIT-Delhi, India
- Awarded Grace Hopper Celebration India (GHCI) 2015 student scholarship to attend the conference
- Selected for Microsoft's Summer School on Wireless Networking at IISc 2014, Bangalore, India
- Won First prize at Wizshark competition held by Mojo Networks at COMSNETS 2014, Bangalore, India
- **Institute Gold Medal for all-rounder of the year** (2010 - 2012), International Institute of Information Technology - Bangalore, India
- Selected as a student fellow at Apricot 2012 conference from ISOC - Bangalore, India
- **Director's Merit List for M.Tech in 1st and 2nd semester**, IIIT-Bangalore, India
- **Batch Topper in Training Program at Accenture**, IDC of Informatica Batch (2008), Bangalore, India
- College Rank Holder, B.Tech (Computer Science and Engineering) 2008 Batch, Delhi, India

Publications

- Journal Papers

1. A. Pinge, V. Gad, **D. Jaisinghani**, S. Ghosh, S. Sen. Detection and Monitoring of Stress using Wearables: A Systematic Review. Accepted at the Frontiers in Computer Science for Mobile and Ubiquitous Computing, 2024.
2. H. Truong, **D. Jaisinghani**, S. Jain, A. Sinha, J. Ko, R. Balan. Tracking People Across Ultra Populated Indoor Spaces By Matching Unreliable Wi-Fi Signals with Disconnected Video Feeds accepted for publication in Elsevier Pervasive and Mobile Computing, 2023
3. **D. Jaisinghani**, N. Phutela. Packets-to-Prediction: An Unobtrusive Mechanism for Identifying Coarse-Grained Sleep Patterns with Wi-Fi MAC Layer Traffic" accepted for publication in MDPI Sensors 2023.

4. N. Phutela, A. N. Chowdary, S. Anchlia, **D. Jaisinghani**, Goldie Gabrani. Unlock Me: A Real-World Driven Smartphone Game to Stimulate COVID-19 Awareness, International Journal of Human-Computer Studies, 2022.
5. K. Sankhe, **D. Jaisinghani**, and K. Chowdhury. ReLy: Machine Learning for Ultra-Reliable, Low Latency Messaging in Industrial Robots. Accepted in IEEE Communications Magazine '21
6. S. Sanchez, S. Mohanti, **D. Jaisinghani**, and K. Chowdhury, "Millimeter-wave Base Stations in the Sky: An Experimental Study of UAV-to-Ground Communication", Accepted at The Transactions of Mobile Computing (TMC '20)

- Conference Papers

1. **D. Jaisinghani**, N. Gupta, M. Maity, and V. Naik. Adaptive ViFi: A Dynamic Protocol for IoT Nodes in Challenged Wi-Fi Network Conditions. Accepted at The 17th IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS '20)
2. K. Sankhe, **D. Jaisinghani**, and K. Chowdhury. CSIscan: Learning CSI for Efficient Access Point Discovery in Dense Wi-Fi Networks. Accepted at The 28th IEEE International Conference on Network Protocols (ICNP '20).
3. G. Reus-Muns, **D. Jaisinghani**, K. Sankhe, and K. Chowdhury. Trust in 5G Open RANs through Machine Learning: RF Fingerprinting on the POWDER PAWR Platform. Accepted at The IEEE Global Communications Conference (Globecom '20).
4. S.Mohanti, N. Soltani, K. Sankhe, **D. Jaisinghani**, M. Felice, and K. Chowdhury. AirID: Injecting a Custom RF Fingerprint for Enhanced UAV Identification using Deep Learning. Accepted at The IEEE Global Communications Conference (Globecom '20).
5. N. Soltani, K. Sankhe, S. Ioannidis, **D. Jaisinghani**, and K. Chowdhury. Spectrum Awareness at the Edge: Modulation Classification Using Smartphones. Accepted at The IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN 2019)
6. (H. Fulara, G. Singh)*, **D. Jaisinghani**, M. Maity, T. Chakroborty, and V. Naik. Use of Machine Learning to Detect Causes of Unnecessary Active Scans in Wi-Fi Networks. Accepted at The 20th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM 2019, *Equal Contributors), Dataset Available at Crawdad Public Repository, Washington DC, USA, June 10-12 2019
7. **D. Jaisinghani**, R. Balan, V. Naik, Y. Lee, and A. Misra. Experiences & Challenges with Server-Side Wi-Fi Indoor Localization Using Existing Infrastructure. Accepted at The 15th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (Mobiquitous 2018), New York City, USA, Nov 5-7 2018
8. **D. Jaisinghani**, V. Naik, S. Kaul, and S. Roy. Sniffer-based Inference of the Causes of Active Scanning in Wi-Fi Networks. Accepted at The Twenty Third National Conference on Communications (NCC 2017), Madras, India, Mar 2-4 2017
9. **D. Jaisinghani**. Swift - A Low Complexity Protocol for Event & Location Tracking in Wireless Sensor Networks. Published in proceedings of Ninth IEEE International Conference

on Wireless and Optical Communications Networks WOCN Next Generation Internet, India, September 2012.

- Workshop Papers
  1. **D. Jaisinghani**, W. Spielbauer, M. Avdonina and N. Britten. Can A Smartwatch Tell, If You Are Brushing Your Teeth Correctly? Accepted at The 23rd International Conference on Pervasive Computing and Communications (PerCom 2025) - EDGE-WELL Workshop to be held on March 17-21, 2025, Washington DC, USA.
  2. R. Singh, N. Phutela, **D. Jaisinghani**. iMat:A Non-Intrusive and Low Cost Sleep Posture Estimation Mat. Accepted at The 16th International Conference on COMmunication Systems & NETworkS - NetHealth Workshop (COMSNETS '24)
  3. A. Pinge, **D. Jaisinghani**, S. Ghosh, A. Challa, S. Sen. mTanaaw: A System for Assessment and Analysis of Mental Health with Wearables. Accepted at The 16th International Conference on COMmunication Systems & NETworkS - NetHealth Workshop (COMSNETS '24)
  4. **D. Jaisinghani**, Tanzeel Ur Rehman, Ryan Mulkey, Andrew Berns. IoT in the Air: Thread-enabled Flying IoT Network for Indoor Environments. Accepted at The 21st International Conference on Pervasive Computing and Communications (PerCom 2023) - PerSASN Workshop to be held on March 13-18, 2023, Georgia, Atlanta, USA.
  5. H. Grover, **D. Jaisinghani**, N. Phutela, S. Mittal. ML-Based Device-Agnostic Human Activity Detection with Wi-Fi Sniffer Traffic. Accepted at The 14th International Conference on COMmunication Systems & NETworkS - NetHealth Workshop (COMSNETS '22)
  6. **D. Jaisinghani**, V. Naik, and S. Kaul. Empirically derived mechanisms to detect and deal with the cause of performance drop in Wi-Fi networks. Accepted at PhD Forum held in conjunction with The 14th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2016), on June 26 2016, Singapore [Short]
  7. **D. Jaisinghani**, V. Naik, S. Kaul, and S. Roy. Realtime Detection of Degradation in Wi-Fi Network's Goodput Due to Probe Traffic. Accepted at The Eleventh International Workshop on Wireless Network Measurements and Experimentation (WiNMeE 2015) in conjunction with The 13th International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt 2015), May 25, Mumbai, India.

- Posters & Demos
  1. M. Avdonina, R. Adhikary, S. Sen, **D. Jaisinghani**. An Automated Method to Detect Tooth Brushing Activity with Smartwatch Sensors, Summer Undergraduate Research Presentation, UNI, July 2024
  2. J. Babb, **D. Jaisinghani**. High Precision Localization With BLE Tags, Summer Undergraduate Research Presentation, UNI, July 2024
  3. B. Schmidt, **D. Jaisinghani**. Improving Student's Socialness with Neural Networks on Smartphones, Summer Undergraduate Research Presentation, UNI, July 2024

4. V. Kiselov, **D. Jaisinghani**. Leveraging Multi-Modal Sensing to Detect Student Safety on Campus, Summer Undergraduate Research Presentation, UNI, July 2024
5. B. Schleter, M. Avdonina, R. Adhikary, **D. Jaisinghani**, S. Sen. Poster: An Automated Method to Detect Tooth Brushing Activity with Smartwatch Sensors. ACM MobiSys 2024.
6. H. Truong, J. Ko, **D. Jaisinghani**, S. Jain, G. Anish, R. Balan. Improving the Performance of Wi-Fi Indoor Localization in UNKNOWN and DENSE Environments. ASSET Symposium. ACM MobiSys 2024.
7. X. Wang, **D. Jaisinghani**, A. Berns. Integrating External Sensors with CrazyFlie Drones. Summer Undergraduate Research Presentation, UNI, July 2023
8. V. Xersa, **D. Jaisinghani**. Applications of Wi-Fi Probe Requests. Summer Undergraduate Research Presentation, UNI, July 2023
9. J. Brustkern, **D. Jaisinghani**, S. Diesburg. SocioApp: Neural Networks to Detect How Social Are You?. Summer Undergraduate Research Presentation, UNI, July 2023
10. X. Wang, **D. Jaisinghani**, A. Berns. Integrating External Sensors with CrazyFlie Drones. Summer Undergraduate Research Presentation, UNI, July 2023
11. T. Ur Rehman, **D.Jaisinghani**, S. Dieburg, A. Berns. Towards understanding the robustness of flying mesh network. Research at Capitol, 2023
12. W. Afeaneku, A. Berns, **D. Jaisinghani**, S. Diesburg. SocioApp: Neural Networks to Detect How Social Are You? Research at Capitol, LSMRCE LSAMP 2023 [*Favorite Poster Award @ LSAMP 2023*]
13. R. Mulkey, T. Ur Rehman, **D.Jaisinghani**, S. Dieburg, A. Berns. Towards understanding the robustness of flying mesh network. Summer Undergraduate Research Presentation, UNI, July 2022
14. V. Xersa, A. Berns, **D. Jaisinghani**, S. Diesburg. Leveraging ML to Detect the Interference Patterns of Co-Existing IoT and Non-IoT networks. Summer Undergraduate Research Presentation, UNI, July 2022
15. S. Owens, **D.Jaisinghani**, S. Dieburg, A. Berns. Quantifying the Impact of IoT networks when co-existing with Production Wi-Fi Network. Summer Undergraduate Research Presentation, UNI, July 2022
16. W. Afeaneku, A. Berns, **D. Jaisinghani**, S. Diesburg. SocioApp: Neural Networks to Detect How Social Are You? Summer Undergraduate Research Presentation, UNI, July 2022
17. A. Walker, **D. Jaisinghani**, S. Diesburg. SocioApp: Detecting Your Sociability Status with Your Smartphone. Research in the Capitol Event, Feb 2022
18. T. Michalicek, S. Kirschbaum, **D. Jaisinghani**, S. Diesburg, A. Berns, Towards a Flying Mesh Network for Disaster scenarios, Research in the Capitol Event, Feb 2022
19. J. Pulse, **D. Jaisinghani**, A. Berns, Leveraging Machine Learning for Detecting IoT-based Interference in Operational Wi-Fi Networks, Research in the Capitol Event, Feb 2022
20. A. Walker, **D. Jaisinghani**, S. Diesburg. SocioApp: Detecting Your Sociability Status with

Your Smartphone. Summer Undergraduate Research Presentation, UNI, July 2021

21. C. Cronin, B. Purvis, S. Diesburg **D. Jaisinghani**. On the Vulnerability of OpenThread to Agile Denial of Service Attacks. Summer Undergraduate Research Presentation, UNI, July 2021
22. B. Purvis, **D. Jaisinghani**, S. Diesburg, H. Rashid, Demo:*BubbleNet*: Towards developing an IoT-based Physically Distant Classroom For Personal Bubbles. Summer Undergraduate Research Presentation, UNI, July 2021
23. B. Purvis, **D. Jaisinghani**, S. Diesburg, H. Rashid, Demo:*BubbleNet*: Towards developing an IoT-based Physically Distant Classroom For Personal Bubbles. Accepted at The 41st IEEE International Conference on Distributed Computing Systems (ICDCS '21).
24. **D. Jaisinghani**, H. Fulara, G. Singh, M. Maity and V. Naik. Demo: Elixir – Efficient Data Transfer in Wi-Fi-based IoT nodes. Accepted at The 24th Annual International Conference on Mobile Computing and Networking (MobiCom 2018), October 29 - November 2, 2018, New Delhi, India.
25. **D. Jaisinghani**. Understanding the Impact of Unnecessary Active Scans in WLANs. Accepted in Graduate Forum at 10th International Conference on COMmunication Systems & NETworkS (COMSNETS), January 3 - 7, 2018, Bangalore [*Best Graduate Forum Presenter Award*]
26. **D. Jaisinghani**, V. Naik, S. Kaul, R. K. Balan, and S. Roy. Mitigating the Impact of Unnecessary Active Scans in Heavily Utilized WLANs. Accepted at 10th International Conference on COMmunication Systems & NETworkS (COMSNETS), January 3 - 7, 2018, Bangalore, India
27. **D. Jaisinghani**, V. Naik, and S. Kaul. Mechanisms for Detecting and Mitigating Performance Drop in Large Scale Wi-Fi Networks. Accepted at ASSET Symposium held in conjunction with The 14th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), on June 23 - 25 2016, Singapore
28. **D. Jaisinghani**, V. Naik, S. Kaul, and S. Roy. Realtime Detection of Degradation in Wi-Fi Network's Goodput Due to Probe Traffic. Accepted at Women's Workshop held in conjunction with The 14th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), on June 26 2016, Singapore
29. **D. Jaisinghani**, V. Naik, S. Kaul, and S. Srikanth. Analyzing Performance of Enterprise Wireless Networks in Presence of Heterogeneous Wireless Networks. Accepted at 1st Xerox Research Centre India (XRCI) Open, Mar 14, 2014, Bangalore, India

- Patents

1. **D. Jaisinghani** and A. Berns. Low Power, High Resiliency Internet of Flying Things Network. [Filed, Under Review]
2. K. Chowdhury, K. Sankhe, **D. Jaisinghani** Method and apparatus for access point discovery in dense Wi-Fi networks. Publication Date- 2023/1/10. US Patent: 11553410

- Research Thesis and arXiv
  1. J. Pulse, **D. Jaisinghani**. Leveraging machine learning for detecting IoT-based interference in operational Wi-Fi networks. Undergraduate Honors Thesis published with UNI Scholarworks. May 2022
  2. **D. Jaisinghani**, R. Balan, V. Naik, Y. Lee, and A. Misra. [Extended Version] Experiences & Challenges with Server-Side Wi-Fi Indoor Localization Using Existing Infrastructure. *arXiv 2021*
  3. **D. Jaisinghani**. Understanding the Role of Active Scans for their Better Utilization in Large-scale Wi-Fi Networks. PhD Thesis published with Indraprastha Institute of Information Technology - Delhi, India, April 2019.
  4. **D. Jaisinghani**, V. Naik, S. Kaul, R. K. Balan and S. Roy. Improving the Performance of WLANs by Reducing Unnecessary Active Scans. *arXiv 2018*
  5. **D. Jaisinghani**. Swift - A Low Complexity Protocol for Event & Location Tracking in Wireless Sensor Networks. Masters Thesis published with International Institute of Information Technology - Bangalore, India, June 2012.

- Papers under review
  1. An automated way to detect student safety on campus by leveraging anomaly detection techniques on multi-modal sensing data
  2. Can A Smartwatch Tell If You Are Brushing Your Teeth Correctly?
  3. SenseStress: A Stress Detection Approach for Differentiating Psychological and Physical Stress using Off-the-shelf Device

Student Research Advising

- **Serving as External PhD Advisor for Anuja Pinge Achyut at BITS Pilani, Goa, India [Expected Year of Graduation 2027]**
- **Served as External PhD Thesis Examiner for Hai Truong at School of Information Systems, Singapore Management University, Singapore [Graduated 2024]**
- **External PhD mentor for Nishtha Phutela Graduated Sept 2022 at BML Munjhal University, India**
- Current and Past Students at UNI [***Advised 20+ students***]
  - Brandon Schmidt, Jackson Babb, Noah Britten, Marina Avdonina, Volodymyr Kiselov, William Spielbauer, Fall 2024
  - Brandon Schmidt, Jackson Babb, Marina Avdonina, Volodymyr Kiselov, Summer 2024
  - Blake Schleter, Marina Avdonina, Volodymyr Kiselov, Spring 2024
  - Vesa Xersa, Volodymyr Kiselov, Salimatou Diallo, Xiaowen Wang, John Brustkern, Marian Avdonina, Blake Schleter, Fall 2023

  - Tanzeel Rehman, Vesa Xersa, John Brustkern, Xiaowen Wang, Summer 2023
  - Joseph Greve, Ruth Abate, Winfred Afeaneku, Tanzeel Rehman, Vesa Xerxa, Xiaowen Wang, Spring 2023
  - Ruth Abate, Winfred Afeaneku, Sam Owens, Ryan Mulkey, Tanzeel Rehman, Vesa Xerxa, Fall 2022
  - Winfred Afeaneku, Sam Owens, Ryan Mulkey, Tanzeel Rehman, Vesa Xerxa, Summer 2022
  - Josh Pulse, Tyler Michalicek, Aaron Walker, Spring 2022
  - Sarah Kirschbaum, Aaron Walker, Josh Pulse, Troy Miller, Fall 2021
  - Aaron Walker, Summer Undergraduate Research Program (SURP) 2021
  - Josh Pulse, Md. Raza, Sulaiman Al Hudaifi, Troy Miller, Summer Undergraduate Research (No-Credit) 2021
  - Brandon Purvis (UNI), Undergraduate Research 2021
  - Zachary Alcala, Smartphone App Development 2021
  - Brett Biermann, Smartphone App Development 2021

Externally Funded Projects

- NSF Grant Accepted NSF 23-526 - CC*-CIRA - High Performance Computing Solutions for small MidWest Institutions, Sept 2023 [*Planning Grant*, PI: Dr. Aleksander Poleksic, Co-PI- Dr. Sarah Diesburg, Dr. Dheryta Jaisinghani, Dr. Timothy Kidd, and Dr. Pavel Lukashev, Apr 01 '2024 - Mar 31 '2025, Total Authorization: $173,368.00]

Internally Funded Projects

- Ongoing
  - Development of a smartphone-based solution for self-management of Type 1 diabetes among children and adolescents
  - Leveraging smartwatch sensors to accurately identify toothbrushing techniques
  - Using multi-modal sensing to efficiently differentiate between mental and physical stress
  - Developing privacy preserving mechanisms to improve sociability status of students on campus
  - Use of indoor flying mesh networks to address disaster scenarios
- Successfully Completed
  - Interference Inference of IoT networks
  - Use of management frames - probe requests in Wi-Fi networks to transmit data in dense networks [Code Available at GitHub]
  - Use of Wi-Fi Signals for Device-free Human Activity Detection
  - Wi-Fi based Indoor Localization without any client or Access Point modification

  - Optimizing performance of large-scale Wi-Fi networks by dealing with useless active scans [Code Available at GitHub]
  - Type 1 Diabetes Management App

Panels, Talks, and Tutorials

- **Panelist at N2Women (Networking Networking Women) Event co-located with IEEE Percom 2023 along with highly respected professors from Dr. Carla Gomes (Cornell University), Dr. Damla Turgut (University of Central Florida), and Dr. T. Kandappu (Singapore Management University)**
- **Keynote talk titled "Towards Developing Autonomous Systems for Social Good" at Midwest Instruction and Computing (MICS) Symposium 2023**
- Invited Expert Talks on "Operating System Concepts - Boot Process, Shell Scripts, Linux Kernel Modules", BML Munjhal University, India. December 2022
- **Invited to interview at United Nations initiative GirlsUp.org for motivating girls in STEM Sept. 2020**
- Seminar on "Effective technical writing" at Genesys Lab, Northeastern University, Boston, USA, August 26, 2019
- PhD Thesis Defense "Understanding the Role of Active Scans for their Better Utilization in Large-scale Wi-Fi Networks" [YouTube, Slides, Audio-Slides, Thesis]
- Hands-on Session titled "Kernel Programming" during Workshop on Computer Systems at Ashoka University, India, Dec 9 2018 [Invited]
- **Talk titled "Experiences & Challenges with Server-Side Wi-Fi Indoor Localization Using Existing Infrastructure" at NetSys Lab, Stony Brook University, Nov 5 2018 [Invited Talk]**
- Expert Guest Lecture on Wi-Fi and IoT at BCIIT, Delhi, India, March 26 2018 [Invited Talk]
- Tutorial "IEEE 802.11 - MAC Protocols and Frames" at IIIT-Delhi, India, December 2017 [YouTube, Slides]
- Lecture "Decoding Wi-Fi Communication - From Application to MAC Layer" as part of Wireless Networks course at IIIT-Delhi, India, September 2017
- **Talk titled "Opening Nuts and Bolts of Linux Wi-Fi Subsystem" with IEEE Student Chapter, IIIT-Delhi, India, March 2017** [YouTube, Slides, *Most viewed technical talk on IIIT-Delhi's YouTube Channel*]
- Talk titled "Towards Detecting and Reducing Unnecessary Active Scans in Wi-Fi Networks", at Singapore Management University, Singapore, March 2017
- Wi-Fi tutorial for DRDO scientists at IIIT-Delhi, India, February 2017 [Invited Talk]
- Talk titled "Wi-Fi - How does it work" for Summer School arranged for High School Students at IIIT-Delhi, India, March 2016

Teaching

- Since Fall 2020 @ UNI [*Three course rotations every Fall and Spring*]
  - Beginner – Introduction to programming with C and C++
  - Intermediate – Intermediate Computing with Java
  - Advanced – Operating Systems, Mobile Computing, Networking, System Administration
- Other Teaching Positions
  - Teaching Assistant, Competitive Programming, Summer 2018, Indraprastha Institute of Information Technology - Delhi, India [Incharge: Prof. Pankaj Jalote]
  - Head Teaching Assistant, Mobile Computing, Winter 2018, Indraprastha Institute of Information Technology - Delhi, India [Incharge: Prof. Pushpendra Singh]
  - Head Teaching Assistant, Computer Networks, Winter 2014, Indraprastha Institute of Information Technology - Delhi, India [Incharge: Prof. Vinayak Naik]
  - Head Teaching Assistant, Technical Communication, Monsoon 2013, Indraprastha Institute of Information Technology - Delhi, India [Incharge: Prof. Pankaj Jalote]
  - Teaching Assistant, Software Engineering, Spring 2012, International Institute of Information Technology - Bangalore, India [Incharge: Prof. Sumit Mediratta]
  - Teaching Assistant, Software Engineering, Fall 2011, International Institute of Information Technology - Bangalore, India [Incharge: Prof. K. V. Dinesha]
  - Team Leader, Web Software Module for Slot Scheduling at National Association for the Blind, Bangalore, Fall 2011 - Spring 2012, International Institute of Information Technology - Bangalore, India

Service

- **Department and University**
  - Member of **Intellectual Property Review Committee** at UNI since Dec 2024
  - Student Outcome Assessment
    - Committee member (along with Dr. Aleksandar Poleksic, and Dr. Mark Fienup) for Student Outcome Assessment, Dept. of Computer Science, UNI, 2024
    - Committee member (along with Dr. Aleksandar Poleksic, Dr. Sarah Diesburg, Dr. Mark Fienup, and Dr. Andrew Berns) for Student Outcome Assessment, Dept. of Computer Science, UNI, 2023
    - Committee member (along with Dr. Eugene Wallingford, Dr. Sarah Diesburg and Dr. Andrew Berns) for Student Outcome Assessment, Dept. of Computer Science, UNI, 2022
    - Committee member (along with Dr. Sarah Diesburg and Dr. Ben Schafer) for Student Outcome Assessment, Dept. of Computer Science, UNI, 2021

  - UNI Computer Science Dept. **Academic Advisor** AY'21-*Present
- **Editorial/Board Positions**
  - Editorial Board Member for Elsevier AdHoc Networks 2023-2026
  - Guest Editor for Special Edition - VSI: Edge & Serverless Computing with Elsevier AdHoc Networks 2024-2025
  - COMSNETS Association Board Member 2024-*Present
- **Conferences and Workshops**
  - Social Media Chair for IEEE Percom 2025
  - Organizing EdgeWell Workshop with IEEE Percom 2025
  - Overall Workshops Co-Chair (8 workshops) for IEEE/ACM COMSNETS 2025
  - Poster Co-Chair for IEEE/ACM COMSNETS 2025
  - Poster Co-Chair for ACM Mobisys 2024
  - COMSNETS Association Board Member starting 2024
  - Mentorships session Co-Chair for IEEE/ACM COMSNETS 2024
  - Overall Workshops Co-Chair (8 workshops) Co-Chair for IEEE/ACM COMSNETS 2024
  - Organized NetHealth Workshop 2024 with IEEE/ACM COMSNETS 2024
  - Overall Workshops Co-Chair (6 workshops) Workshops Co-Chair for IEEE/ACM COMSNETS 2023
  - Organized Third IEEE/ACM Workshop on Serverless To sErvE moRe at Scale (STEERS) 2023
  - Served as Workshops Co-Chair for IEEE/ACM COMSNETS 2022
  - Organized Second IEEE/ACM Workshop on Serverless To sErvE moRe at Scale (STEERS) 2022
  - Organized First IEEE/ACM Workshop on Serverless To sErvE moRe at Scale (STEERS) 2021 in conjunction with CCGrid '21
  - Session Chair at The 17th IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS '20)
  - Organized First IEEE International Workshop on Distributed and Intelligent Computing at the Edge (DICE) 2020 with IEEE DCOSS '20
- **Reviewing**
  - Technical Program Committee Member for IEEE International Conference on Computer Communications and Networks (ICCCN 2024)
  - Technical Program Committee Member for IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS) 2024

- Technical Program Committee Member for IFIP - Internet of Things (IFIP-IoT) 2024
- Reviewer for Transactions on Communications, MDPI Behavioral Sciences, Internet of Things Journal, Pervasive and Mobile Computing, Transactions of Mobile Computing 2024
- Jury Member forEnvironmental Sensing Project Competition 2023 @ University of Helsinki
- Reviewer for Transactions of Mobile Computing, Transactions of Wireless Computing, IEEE Internet of Things, Elsevier AdHoc Networks, Journal of Autonomous Intelligence, Pervasive and Mobile Computing, IFIP IoT 2023
- Technical Program Committee Member for Poster Session @ IEEE ICDCN 2023
- Reviewer for Transactions of Mobile Computing, IEEE Internet of Things Journal, Elsevier AdHoc Networks, Elsevier Pervasive and Mobile Computing Journal, Elsevier Journal of Information Security and Applications 2022
- Reviewer for IEEE Internet of Things Journal, Journal of Information Security and Applications, Elsevier AdHoc Networks, Elsevier Pervasive and Mobile Computing Journal 2021
- Technical Program Committee Member Percom Industry Track, IEEE SLICE 2021
- Member of ACM SIGCOMM Artifact Evaluation Committee, 2021
- Reviewer for EAI Mobiquitous, Transactions of Mobile Computing 2020
- Technical Program Committee Member COMSNETS Graduate Forum, 2020
- Reviewer for Pervasive and Mobile Computing, Transactions of Mobile Computing 2019
- Shadow Program Committee Member for IMC 2018
- Member of Technical Program Committee ACM S^3 to be held in conjunction with Mobicom 2018
- Reviewer for ACM IMWUT, Transactions of Mobile Computing 2018

- **Miscellaneous**
  - Mentor for PhD Students with PhD Clinic, ACM India AY 2020 - Current
  - Faculty Advisor for Women In Computing Student Group at the University of Northern Iowa, AY 2021-2022
  - Faculty Collaborator with Dana Potter (IDS, UNI) for Illuminate Art and Light Festival for delivering Interactive Smartphone Apps, 2021
  - Faculty Advisor for Women In Computing Student Group at the University of Northern Iowa, AY 2021-2022
  - Alumni mentor for the new batch of graduate students at IIIT-Bangalore, India Sept. 2020
  - M.Tech Admissions Interview Panel for IIIT-Delhi, 2016, 2018
  - Member of Post-Graduate Committee for IIIT-Delhi for the academic year 2015-2016
  - Core Committee Member - Research Showcase - Indraprastha Institute of Information Technology - Delhi, 2013-2016.

Trainings & Certifications

- UNI's Academic Advising Training (Fall 2022)
- UNI's Five-week Research Grant Writing Workshop (May-June 2021)
- Collaborative Institutional Training Initiative (CITI Program) (Jul 2021)
- Technical Writing Workshop, IBM I-CARE (Aug 2013)
- Microsoft Certified Professional Developer (MCPD) (April 2010) and Microsoft Certified Technology Specialist (MCTS) (February 2010)

Memberships

- Professional Memberships – ACM, ACM Sigmobile, IEEE, IEEE - Women in Engineering, N2Women

Press

- Local Professors, students uncover plenty of uses for AI, March 20, 2024
- Four UNI faculty advance research following Intellectual Property and Innovation Disclosure Competition, May 2, 2023
- Indoor drone research takes flight for UNI student, Sept 20, 2023
- Programmed for success – UNI student finds opportunity building mobile apps, Mar 17, 2023
- Featuring our Faculty: Dheryta Jaisinghani, Mar 30, 2022
- Cracking the code to social distancing, Aug 5, 2021
- Celebrating ideas, celebrating Wi-Fi, Sept 15, 2017

Conferences & Workshops Attended

- 2024 - ACM MOBISYS, Tokyo, Japan, NSF Aspiring Cyber Physical Systems PI Workshop and Meeting, Tennessee, USA, IEEE/ACM COMSNETS, Bangalore, India
- 2023 - IEEE PERCOM, Atlanta, USA, COMSNETS '23 [Virtually]
- 2022 - IEEE/ACM COMSNETS[Virtually]
- 2021 - STEERS[Virtually]
- 2020 - IEEE MASS[Virtually], ICNP '20 [Virtually]
- 2019 - ACM SenSys New York, USA, IEEE DySPAN, New Jersey, USA, IEEE WoWMoM, Washington DC, USA
- 2018 - ACM Mobicom, Delhi, India, Mobiquitous, New York, USA, COMSNETS, Bangalore, India, ASSET, Bangalore, India
- 2017 - NCC, IIT-Madras, India
- 2016 and prior - Research Showcase, IIIT-D, Delhi, India, MobiSys 2016, Singapore, WiOpt, Mumbai, India, WOCN, Indore, India, APRICOT, New Delhi, India, IMSAA, Bangalore, India, National Level conferences for I.S.T.E (6th and 7th National Conference)

References

- Prof. Kaushik Chowdhury, The University of Texas at Austin, USA kaushik@utexas.edu
- Prof. Vinayak Naik, BITS-Pilani Goa, India vinayak@goa.bits-pilani.ac.in
- Prof. Rajesh K. Balan, Singapore Management University - Singapore, rajesh@smu.edu.sg

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